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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,823	09/03/2003	Toshihiro Takeuchi	SHM-14986	4117
40854	7590	07/10/2006	EXAMINER	
RANKIN, HILL, PORTER & CLARK LLP 4080 ERIE STREET WILLOUGHBY, OH 44094-7836			AMIRI, NAHID	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/653,823

Applicant(s).

TAKEUCHI, TOSHIHIRO

Examiner

Nahid Amiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 03 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☒ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03 September 2003.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☒ Other: exhibit.

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to a frame joint structure, classified in class 403, subclass 174.
- II. Claims 5-6 drawn to a method of installing a guardrail system, classified in class 29, subclass 423.

The inventions are independent or distinct, each from the other because:

Inventions I and II are related as product made and process of making. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product of Group I, as claimed, can be made in a materially different manner than that of the process of Group II as claimed. In particular, with respect to claim 1, the frame joint structure can be formed by fastening the end portion of the second frame member with an end portion of the first frame member using the bolts.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. David E. Spaw May 23, 2006 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-4. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-6 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,925,218 Kunz et al. in view of US Patent No. 4,287,245 Kikuchi.

With respect to claim 1, Kunz et al. disclose a joint frame joint structure (23, Figs. 1-2) comprising a first frame member (F, see attachment) of U-shaped cross section having a first sidewall, a second sidewall, a bottom wall and an opening (29); a second frame member (F', see attachment), similar to the first frame member, of U-shaped cross section having an opening (29), said second frame member (F') having an end portion connected to at least one of the first sidewall and the second sidewall of the first frame member (F); a reinforcing member (constituted by the pipe 10) extending into the first frame member (F) and the second frame member (F') by predetermined lengths at a joint of the first frame member (F) and the second frame member (F'); a plate member (22) closing the openings (29) of the first and second frame members (F, F') to form closed cross sections. Kunz et al. does not disclose a foamed resin filling spaces defined by the plate member, the first and second frame member and the reinforcing member. Kikuchi teaches (Fig. 1) a foamed resin (2) placed in a space between the pipe (1) and metal plate (4). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide a foamed resin as taught by Kikuchi in spaces (S, see attachment) defined by the plate member (22) the first and second frame members (F, F') and the reinforcing member (10) of Kunz et al.'s invention in order to insulate the pipe against the heat.

With respect to claim 2, Kunz et al. disclose (Figs. 1-2, column 2, lines 8-10) that the reinforcing member (10) is generally T-shaped.

With respect to claim 3, Kunz et al. disclose (Fig. 3, column 2, lines 60-61) that the reinforcing member (10) is generally L-shaped.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kunz et al. as applied to claims 1-3 above, and further in view of US Patent No. 3,948,247 Heilemann.**

With respect to claim 4, Kunz et al. suggest (Fig. 5) that the plate member (22), the first and second frame members, and reinforcing member (10) may be made of metal in view of the illustration of metal cross-hatching. Kunz et al. does not disclose that the plate member and the first and second frame members are made from a first metal material which is different from a second metal material of the reinforcing member. Heilemann teaches a device (column 5, lines 13-16) having a combination of an aluminum plate with a copper pipe, i.e., two different metal materials. It would have been an obvious matter of design choice to one of ordinary skill in the art to provide Kunz with the first, second frame members and plate member from first metal member and the reinforcing member from a second metal member which is different from first metal member as taught by Heilemann so as to provide chemically compatible materials to minimize corrosion.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior cited references US Patent No. 4,570,391 Auante et al.; US Patent No. 3,590,544 Shepherd; US Patent No. 4,070,125 Ollinger; and US Patent No. 3,835,614 Downing, Jr.; are cited to show a joint structure with u-shaped frame members, and US Patent No. 4,686,741 Moore et al., cited to show a u-shaped frame with the reinforcement, foam and plate members.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-

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7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*na*

Nahid Amiri  
Examiner  
Art Unit 3679  
May 23, 2006



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